

POISONOUS SNAKES of NORTH AMERICA # 9277

Prepared by Arctic, Desert and Tropic Branch

Army Air Forces Tactical Center

INFORMATIONAL BULLETIN No. 20

Andrew H. Price
50¢
Private Library

of
John D. Kilby

SOME FACTS ABOUT POISONOUS SNAKES

Almost everyone is afraid of snakes. Even the harmless kinds are regarded with loathing and often with terror. Fear of snakes is caused partly by our unfamiliarity with them but mostly as the result of a lot of nonsensical fiction and misinformation.

No one expects you to love snakes. It is a good idea to leave them alone. But there is no need for you to fear snakes once you know something about them, their habits, how to identify the dangerous kinds, the simple precautions to take to prevent snakebite and the first aid measures to use in the very rare emergency of being bitten.

Actually, the chances of being bitten by a poisonous snake are very small. For example, deaths from lightning in the United States amount to almost three times the deaths caused by snakebite. In Australia, where there are many kinds of poisonous snakes, the death rate from snakebite averages only 12 persons per year out of a population of 6,500,000. The danger of death from snakebite is considerably less than the possibility of being killed in a jeep wreck or getting shot by accident.

You can dismiss as exaggerations most of the popular literature you've read and the stories you've heard about snakes. Don't believe all the hair-raising tales about the number, size and ferocity of the local snakes in the area where you are based. Natives know all the poisonous kinds but, in addition, they will tell you that many harmless species are deadly. For example, in the United States, the common little puff adder is considered almost universally to be dangerous. This is nonsense; the puff adder is non-poisonous and will hardly ever bite.

Statistics on the number of people bitten by poisonous snakes are unreliable. This is especially true in the wilder areas where dangerous snakes are most numerous. Furthermore, the fatalities are almost always among people who go about barefoot and get bitten on the feet or ankles. For a soldier wearing shoes and leggings, living in a camp where any snake that is seen is promptly killed, the danger of being bitten by a poisonous snake is small compared to the hazards of malaria, cholera, dysentery or other diseases. Mosquitoes are a thousand times more dangerous than snakes.

Soldiers living in camps and barracks, even where snakes are relatively plentiful, may seldom see one. Men working or fighting in the jungle may see them occasionally. Those engaged in clearing ground, cutting grass or jungle, or digging up soil may see a good many snakes, but the chances of getting bitten by a poisonous kind are very small.

There are many reasons why snakes are a minor hazard. First of all, most snakes are harmless. Then, too, snakes are not numerous. Because all snakes feed on other animals, such as rats, rabbits or birds, each snake must have a fairly large area for his hunting ground in order to find enough food. This limits the number of snakes. Furthermore, the danger from most of the few poisonous kinds of snakes is much overrated. It depends mainly on the size

of the snake. Usually, only a large specimen, over two feet long, is really dangerous to a grown man, and these large extremely dangerous snakes are not common. The bite of the smaller snakes is not likely to be fatal.

In addition, nearly all snakes avoid man if possible. It is reported that the king cobra of Southeast Asia, the bushmaster and the tropical rattlesnake of South America, and the mamba of Africa sometimes aggressively attack man, but even these snakes do so only occasionally. Most snakes get out of the way (some of them do it slowly) and seldom are seen.

The distance at which a snake may bite has often been exaggerated. This striking distance seldom is more than half the snake's length; in the large snakes, about a third of the length, and in some snakes, even less. However, some of the small vipers have been known to strike their full length. The distance a cobra can strike is easy to judge since the part raised is never bent into deceptive S-curves but merely is jabbed forward and downward; commonly the distance is almost one foot; in a 12-foot king cobra the striking distance may be as much as 3 feet. Generally, you must be at least within a long step of even a large snake before he can bite you; a normally alert person will be able to see the snake before he gets within striking range. Most bites occur when a snake is stepped on by accident.

All these facts do not mean that no soldier is going to be bitten or that poisonous snakes are harmless creatures which will make fine pets. It is stupid and highly dangerous for an inexperienced person to pick up a snake unless he is positive the snake is harmless.

No man need fear snakes who knows these facts about them. You can minimize the possibility of being bitten by keeping your eyes open, by keeping your hands off *all* snakes, by learning how to identify the dangerous kinds in your own local area, by following the simple precautions for avoiding snakes, and by knowing what to do in the very rare event you are bitten.

Identification of Kinds of Poisonous Snakes

It is not easy to identify a poisonous snake. There is *no single* characteristic which distinguishes a poisonous snake from a harmless one except the presence of poison fangs and glands. You can determine the presence of these parts without danger only in dead specimens, and even then the fangs may be hard to find.

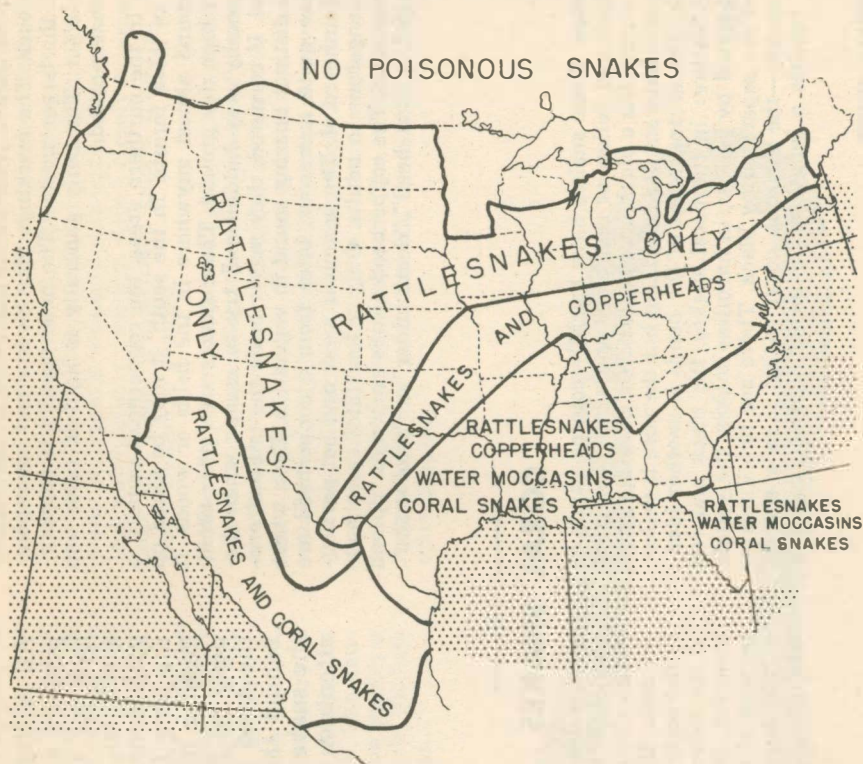
The notion that all poisonous snakes have lance-shaped or triangular heads or some other warning feature is wrong and dangerous. While it is true that many dangerous snakes do have a lance-shaped head, many do not.

The only sure way to identify dangerous snakes is to learn to know and recognize the poisonous kinds on sight in the particular area in which you happen to be based. The inside of this bulletin illustrates and describes the important kinds found in your area. In any given locality you are not likely to see more than one or two kinds and you can learn to identify them further by studying dead specimens. The ability to distinguish a poisonous snake from a harmless one will minimize the danger of snakebite and help to eliminate fear.

About Pythons

Although they are not poisonous, it is worth knowing some facts about pythons, boas and other constrictors. Some of these are large snakes which may grow to 25 feet in length. In spite of the many hair-raising tales concerning these reptiles, they are timid and rarely, if ever, attack man. Boas are found in the American tropics; pythons occur in the tropics of Africa and Asia. They sometimes attack small children but will not deliberately tackle anything that is too big to swallow. A man is too big for even the largest python. If caught or cornered, these snakes may fight back by wrapping their coils around the attacker. If left alone, they are about as dangerous as a collie dog.

DISTRIBUTION OF POISONOUS SNAKES OF NORTH AMERICA



The distribution of the copperhead and the moccasin in Mexico is somewhat indefinite. It is believed that they are found along the Rio Grande River. Moccasins have been found rarely along the coasts of Mexico.

Precautions Against Snakebite

Always wear shoes and leggings or high boots in areas where snakes are common—most snakebites occur below the knee.

Don't walk around barefoot, especially at night.

Don't poke your hands into holes in the ground. Wear gloves and take special care when clearing ground or brush. Watch where you put your hands in rocky places or on stone walls. Look before you touch—many snakebites occur on the hands.

Don't handle a live snake or play with it unless you are absolutely certain the snake is harmless. It takes an expert to handle a dangerous snake. You flirt with death when you pick up an unknown snake.

Keep your eyes open—develop "snake sense". You must be within a long step of even the largest snake before it can bite you. Alertness pays off in safety.

FIRST AID FOR SNAKEBITE

The first problem in treating snakebite is to determine whether it has been caused by a poisonous snake. Many harmless snakes will bite in self-defense. The only reliable way to tell whether the snakebite is poisonous is to identify the snake. However, the wound itself may give some clues.

One good indication of the bite of a poisonous snake is the intense pain which results almost immediately. A severe bite from a harmless snake will hurt no more than a wound made with any sharp instrument. The bite of a viper will cause immediate swelling. A cobra bite may have no local symptoms except for an intense burning pain in the area of the wound.

The appearance of the wound gives additional clues. Vipers do not really "bite". They stab with their fangs. The wound usually consists of two small punctures, generally half an inch or more apart. Sometimes there may be only one puncture if the snake partially misses or has one fang missing. Coral snakes, cobras, mambas and kraits often hang on and chew; the result may be one, two or more puncture marks. Harmless snakes usually have several teeth so that a bite may consist of several punctures formed in a semi-circle. However, it is not always easy to distinguish for certain between the bites of a harmless and a poisonous snake.

If you are bitten by a harmless snake, treat with iodine as an ordinary wound. If the bite is identified as that of a poisonous snake and you can get to a medical officer in a few minutes, apply a tourniquet and let the medical officer administer first aid. If no expert medical aid is available, undertake the following first aid measures immediately—*speed is essential*.

* * *

Place a tourniquet tightly above the bite. Loosen the tourniquet every 15 minutes for one minute at a time.

* * *

Wipe the skin around the bite free of dripped venom. Sterilize skin with antiseptic, such as tincture of iodine.

* * *

Sterilize a sharp knife or razor blade by holding it in the flame of a match or wiping with iodine. Make an x-cut through each fang mark; in fleshy tissue, make each cut about $\frac{1}{2}$ inch long and $\frac{1}{4}$ inch deep; in thin tissue over bones make shallow cuts parallel to bone. Be careful not to cut large blood vessels, tendons or nerves.

* * *

Suck the venom out of the wound. Use a snakebite pump, if available, or cup the mouth of a heated bottle over the wound. If no equipment is available, suck with the mouth through a rubber tissue laid over the bite or suck with the mouth directly on the bite—be sure to spit out the venom and rinse out the mouth periodically. The venom will do no harm unless there are sores in the mouth. Keep up the suction until the swelling ceases to progress.

* * *

If possible, kill the snake and take it to the medical officer so that he can tell what kind of antivenin to use.

* * *

Give morphine to relieve pain. Don't give alcohol under any circumstances.

* * *

Don't put anything into the wound. Potassium permanganate or other chemicals do more harm than good.

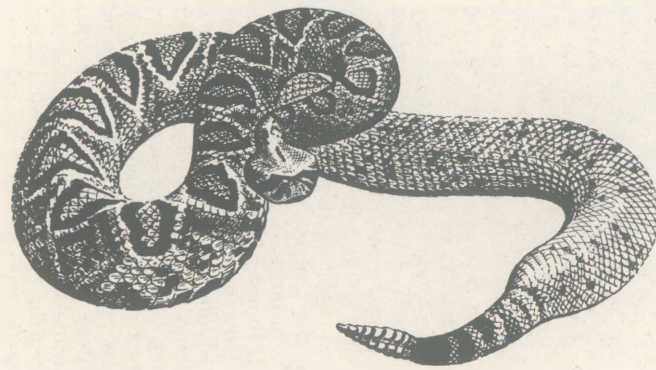
* * *

Carry the victim to a medical officer. Don't let him run or even walk.

THE POISONOUS SNAKES OF NORTH AMERICA

IDENTIFICATION AND HABITS

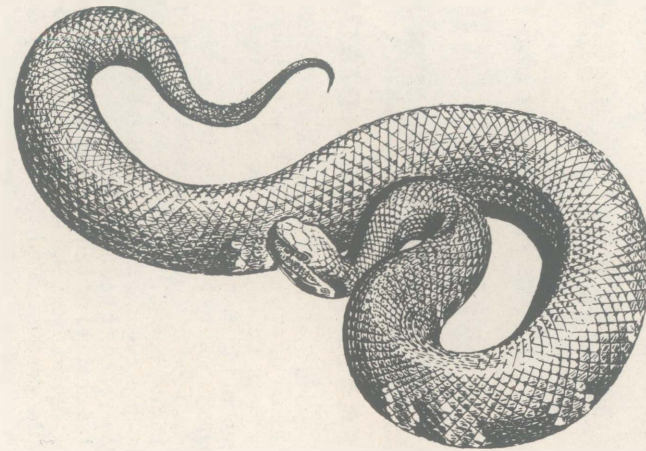
PIT VIPERS



RATTLESNAKES

Description: There are about 27 species of rattlesnakes in the United States and Mexico. Except in those localities where they have been exterminated, one or more types occur in every locality. The rattle on the end of the tail is the best and most positive means of identification. If the rattle is hidden, the thick body and the wide head are good danger signs. Some rattlesnakes are small and their bite is not likely to result in death. Others, such as the diamond backs, may grow to 8 feet long—these are very dangerous snakes. In color, rattlesnakes vary from gray to black and may or may not have spots or blotches.

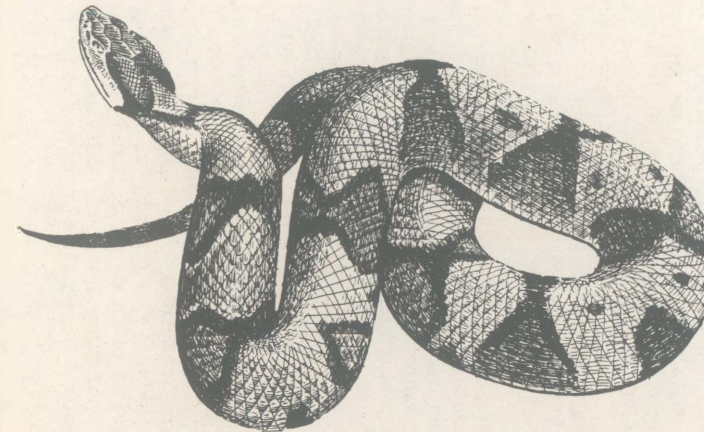
Habits: Rattlesnakes may be found in practically any type of terrain, but they prefer open, sandy places or rocky ledges. They do not always give a warning rattle. When surprised, they may strike first and rattle afterward; some hardly can be induced to sound off under any circumstances. Most rattlesnakes will nearly always try to escape without a fight; however, there is always the chance that a snake may strike at a passerby. The danger from a bite depends upon the size of the snake; a small rattlesnake will make a normal man sick; the bite of a large snake, 3 to 5 feet long, may be fatal.



WATER MOCCASINS

Description: The water moccasin has a thick body and a head which is wider than the neck. It averages 3 to 4 feet in length, but may grow as long as 6 feet. It usually is dull brown or olive in color and is marked with indistinct bands or blotches; the markings sometimes disappear in the larger snakes. The belly is yellowish, blotched with darker markings. Young moccasins are brilliantly colored. The mouth, when open, is white. Often, the water moccasin is confused with various species of harmless water snakes, many of which closely resemble it in color and shape. Unidentified snakes found in or near water should be avoided.

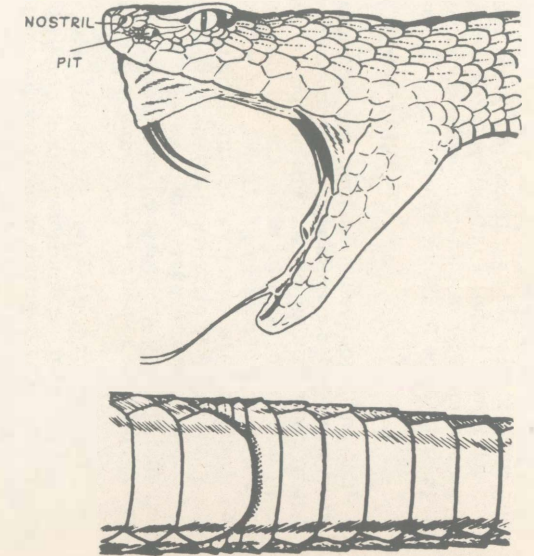
Habits: The water moccasin lives in or near water and is a good swimmer. Often it is seen on logs or leaning trees in swamps; it is fond of basking on branches and logs along sluggish streams, bayous and swamps. The snake usually will retreat when disturbed but it may stand its ground, holding its mouth wide open in a threatening gesture. For this reason, it is sometimes called a "cotton mouth", "gapper" or "trapjaw". The venom of the water moccasin is very poisonous and the bite of a large snake often is fatal.



COPPERHEADS

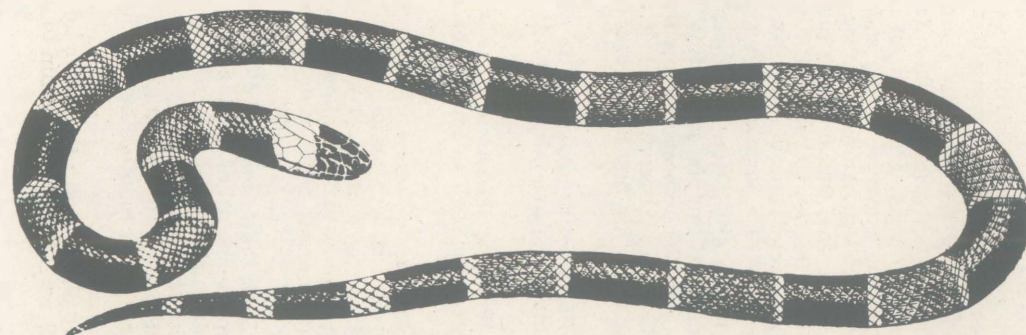
Description: This is a thick-bodied snake with a head which is wider than the neck. It reaches an average length of 2½ feet, but some specimens may be as large as 4½ feet. The color usually is pale brown, with a number of darker cross-bands narrowing at the midline of the back. The markings may be few and inconspicuous on the larger snakes. The head usually is coppery-red in color. The belly generally is light in color and somewhat mottled.

Habits: In the northern areas, the copperhead usually is found in thick forests. In the south, it may be found on dry ground almost anywhere in the fields or woods. It prefers high dry ground. These snakes are rather timid; they usually stay hidden and try to escape when discovered. If cornered, they may vibrate the tail and produce a distinct buzzing sound in vegetation. Even where they are quite numerous, bites from a copperhead are almost unheard of. The venom is weak and not particularly dangerous to adults. Only a few fatal cases have been recorded. The copperhead also is known as "upland moccasin", "chunk-head", "death adder" or "pilot snake".



POSITIVE IDENTIFICATION OF PIT VIPERS

All rattlesnakes, the water moccasin and the copperhead are pit vipers. For positive identification, look for the following characteristics in a dead specimen: (1) Two long fangs in the upper jaw, with none of the other teeth of comparable size; the long fangs may be covered with a curtain of flesh or may be folded back in the mouth. (2) A deep pit between the eye and the nostril. (3) If the head is missing, look at the belly scale just behind the anus; if the scales are in one piece, the snake is a pit viper and is poisonous. Pay no attention to the scales near the tip of the tail.



CORAL SNAKE

CORAL SNAKES

Description: These snakes have brightly colored bands of red, black and yellow or red, black and white. The coral snake always has a black nose in this area. Several harmless snakes have similar coloration but the nose is yellow or pink. The arrangement of the bands is another identifying feature: in the coral snakes, the black and red are separated by yellow; in harmless snakes, the yellow and red are separated by black. There are two kinds of coral snakes—the Arizona coral snake, a rare species which reaches a length of 18 inches, and the common

coral snake averaging 28 inches, but which may reach a maximum length of 39 inches.

Habits: Coral snakes burrow in the ground and seldom are seen. However, they do come out and move around in the early morning or on rainy days. They are related to the cobras and have the same deadly kind of venom; however, the bite of a coral snake usually is not fatal because of the small size of the snake and the shortness of the fangs. The coral snake is not vicious and will bite only if stepped on or handled. Bites are very rare.